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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ole-Bendt Rasmussen

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EXAMINER

O HERN, BRENT T

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/506,419	Applicant(s) RASMUSSEN, OLE-BENDT	
	Examiner Brent T. O'Hern	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37,38,74,75,77-83 and 85-122 is/are pending in the application.
- 4a) Of the above claim(s) 37,38,74,75 and 101-117 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 77-83,85-100 and 117-122 is/are rejected.
- 7) ☒ Claim(s) 85 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims

1. Claims 37-38, 74-75, 77-83, 85-122 are pending with claims 37-38, 74-75 and 101-117 withdrawn.

Examiner's Note

2. Applicant's representative is advised to consult with Applicant to at least review and possibly give a second opinion on how to claim Applicant's invention. The Examiner has attempted to comprehend what Applicant is claiming, however, most of the more than 120+ claims Applicant has presented have significant vagueness and indefinite issues as made of record and the pending language may not accurately reflect what Applicant intends to claim. Furthermore, there continues to be issues such as claims depending on cancelled claims, issues of new matter and further 35 USC 112, second paragraph, issues in addition to an unusually large number of claims that are confusing. If Applicant deems it appropriate Applicant may want to consider reducing the number of claims and focusing more precisely on Applicant's invention. Applicant appears to be overwhelmed with the unusually large number of claims and consequently has difficulty precisely presenting claims absent confusion. In the alternative Applicant is advised to spend a significantly larger amount of time clearing up the record. Furthermore, it is noted that the Examiner has expended an unusually large amount of time on this case due in large part to Applicant's drafting claims that do not comply with U.S. patent law and procedures. Applicant is advised to carefully review each word of each claim to ensure accuracy and compliance with US patent law and procedure.

WITHDRAWN REJECTIONS

3. The 35 U.S.C. 103 rejection of claims 76-77, 83-85, 88-89, 93 and 96 of record in the Office Action mailed 7 May 2007, page 3, paragraph 7, as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364) have been withdrawn due to Applicant's amendments in the Paper filed 24 October 2007.
4. The 35 U.S.C. 103 rejection of claims 79-82, 86, 90, 94-95, 97-98 and 100 of record in the Office Action mailed 7 May 2007, page 3, paragraph 8, as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364) and Lappala (US 2,851,389) have been withdrawn due to Applicant's amendments in the Paper filed 24 October 2007.
5. The 35 U.S.C. 103 rejection of claims 87, 91-92 and 99 of record in the Office Action mailed 7 May 2007, page 4, paragraph 9, as being unpatentable over Britton (US 4,454,184) in view of Britton (US 4,454,184) in view of Rasmussen (US 4,039,364), Velazquez (US 5,614,297) and Cederblad et al. (US 6,204,207) have been withdrawn due to Applicant's amendments in the Paper filed 24 October 2007.
6. The 35 U.S.C. 112, second paragraph, rejections of claims 76-100 of record in the Office Action mailed 7 May 2007, page 4, paragraph 10, have been withdrawn due to Applicant's amendments in the Paper filed 24 October 2007.
7. The 35 U.S.C. 103 rejection of claim 78 of record in the Office Action mailed 7 May 2007, page 6, paragraph 11, as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364) and Johnston (US 3,340,128) have been withdrawn due to Applicant's amendments in the Paper filed 24 October 2007.

NEW REJECTIONS

Claim Objections

8. Claim 85 is objected to because of the following informalities: claim #85 is dependent on cancelled claim #84. Appropriate correction is required.

NEW REJECTIONS

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 81, 95, 120 and 122 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the **written description** requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
10. The phrase "where the discontinuous layer are absent" in claim 81, line 4 is **new matter** as Applicant does not have support for said negative limitation.
11. The phrase "regions of the films free of the discontinuous layer" in claim 95, lines 3-4 is **new matter** as Applicant does not have support for said negative limitation.
12. The phrase "moderate bonds" in claim 120, line 2 is **new matter** as Applicant does not have support for said limitation.
13. Claims 77-83, 85-100 and 118-122 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

14. The terms "**high tensile strength**" in claim 118, lines 3 and 8 and "**strong bonds**" line 14 and the term "**moderate bonds**" in claim 120, line 2 are **relative terms** that renders the claims indefinite. Said terms are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. A person having ordinary skill in the art may interpret the same strength to be low and the same bonds to be weak.

15. Claim 118 recites the limitation "the main layer" in line 9 (more than one main layer), "the discontinuous layer" (more than one discontinuous layer) in line 10, "the pattern" in lines 12 and 13, "the films" in line 14; claim 199 recites "the bonding layers" in line 4; claim 120 recites "the bonding layer" in line 2 and "the pattern" in line 7, claim 122 recites "the bonding layers in line 4 and "the films" in line 5. There is **insufficient antecedent basis** for these limitations in the claims.

16. The phrase "the crossing points" in claim 83, last line is vague and indefinite since the term "the" is both underlined and lined through, thus, it is unclear whether the term is added or deleted.

Examiner's Note

17. In addition to the clear and possible vagueness issues as discussed above, Applicant is advised to carefully review each word of each claim to ensure accuracy and compliance with US patent law and procedure. On numerous occasions Applicant refers to an element in a claim as being singular and plural. Even though the Examiner may understand what Applicant is saying, Applicant may be confronted with possible invalidity issues if Applicant does not correct said possible issues.

Clarification and/or correction is required.

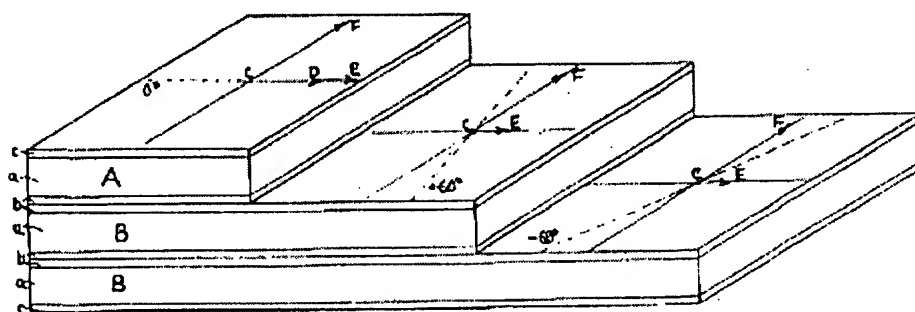
Claim Rejections - 35 USC § 103

18. Claims 118-122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Rogosch et al. (US 3,687,764).

Regarding claims 118, 120 and 122 Rasmussen ('102) teaches a cross-laminate comprising:

a first coextruded film A having a main direction of molecular orientation (See p. 5, ll. 26-31 and FIG-2, cross laminate.)

FIG.2



and including: a main layer comprising a polymer material having a high tensile strength, a patterned layer disposed on a surface of the main layer, where the layer comprises a different polymer material, a second extruded film B having a main direction of molecular orientation and including: a main layer comprising a polymer material having a high tensile strength, a patterned surface layer disposed on a surface of the main layer, where the layer comprises a different polymer material, where the film B is arranged so that the main direction of the film B crosses the main direction of the film A and the pattern of the discontinuous layer of the film B crosses the pattern of the discontinuous layer of the film A, and strong bonds bonding the films together at

intersections of the pattern of the layer of the film A and the pattern of the layer of the film B (See p. 11, l. 25 to p. 12, l. 14, p. 6, ll. 1-9 and FIG-2 wherein films A and B with heat seal layers #c, main layers #a and lamination layers #b, with variable compositions are bonded to each other and wherein the layers are wrapped such as in a gusseted tube and as the layers progress to the opening(s) in the gusseted tube until the layers terminate. Furthermore, the bonding is clearly different and thus stronger or weaker when the bag is formed as compared to the bonding amongst each sub layers, a, b and c, of the films and amongst the films. Additionally, since the various layers comprise various compositions, various bonding amongst the layers and various bonding to form the package then the different regions of the structure clearly have stronger/weaker tensile strengths as compared to other regions.), where the films A and B are either uniaxially or unbalanced biaxially molecularly oriented (See p. 5, ll. 26-31.), however, fails to expressly disclose wherein the various layers are continuous or discontinuous and patterned and the bonding is moderate or weak between the films A and B and the other layers.

However, Rasmussen ('102) teaches wherein the structure is made into a bag for consumers, wherein the layers are continuous when wrapped such as with a gusseted tube and as the layers progress to the opening(s) in the gusseted tube until the layers terminate, becoming discontinuous. Furthermore, each layer clearly has a pattern whether it is substantially the same within the layer or upon the bonded and non-bonded areas with various bonding strengths and the additional layers and or/markings will clearly be applied at various regions in discontinuous and continuous manners to provide for the desired messages (See p. 6, ll. 1-9.). Additionally, pigments are added

to the various compositions providing for further patterns (See p. 11, l. 25 to p. 12, l. 14.)
for the purpose of providing a pleasing, strong bag for containing the packaged goods
(See p. 6, ll. 1-9.).

Furthermore, Rogosch ('784) teaches wherein the patterned multilayered
laminated structures are reinforced with discontinuous and continuous layers of strands
and the bonding varied based on region and layers to be laminated (See col. 3, ll. 20-55
and FIGs 1 and 11, strands #18, 20 and 21.) for the purpose of reinforcing a laminated
structure (See col. 1, ll. 15-26.).

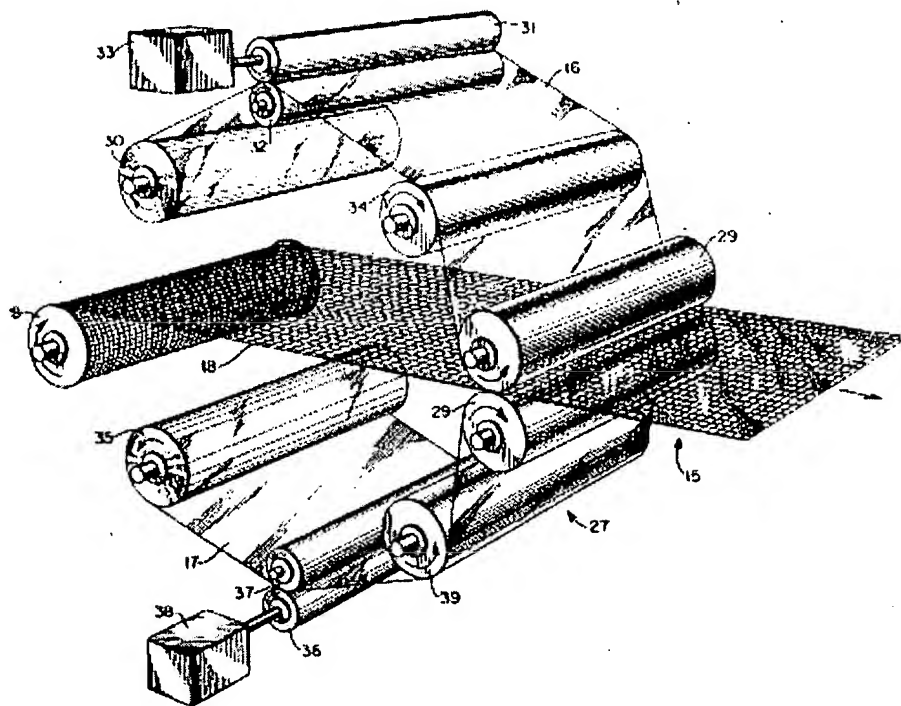


FIG. 1.

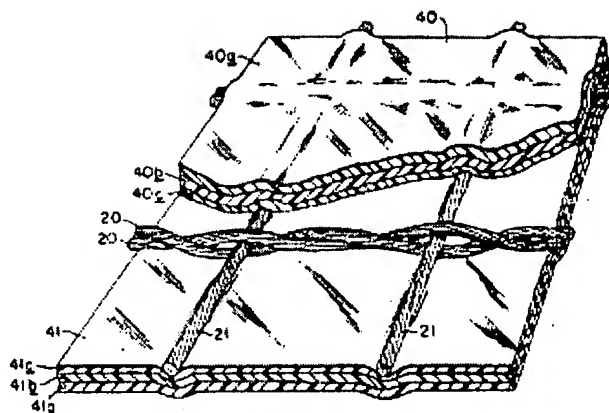


FIG. II.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time Applicant's invention was made to provide the structure with discontinuous, continuous and patterned structure as expressly taught by Rogosch ('784) and obviously taught by Rasmussen ('102) in Rasmussen ('102) in order to provide a strong, pleasing multilayered laminate.

Regarding claim 119, Rasmussen ('102) teaches a cross-laminate discussed above, however, fails to expressly disclose a continuous bonding layer interposed between the main layer and the discontinuous layer of each of the films A and B and weak bonds formed between the bonding layers of the films A and B in regions of the films free of the discontinuous layers.

However, the layers of Rasmussen ('102) as illustrated in FIG-2 and explained above are clearly continuous in the curved direction when wrapped to form the package and discontinuous in the transverse direction in the direction of the opening of the package (See p. 11, l. 25 to p. 12, l. 14, p. 6, ll. 1-9 and FIG-2.) for the purpose of providing a pleasing, strong bag for containing the packaged goods (See p. 6, ll. 1-9.).

Furthermore, Rogosch ('784) teaches wherein the patterned multilayered laminated structures are reinforced with discontinuous and continuous layers of strands *(See col. 3, ll. 20-55 and FIGs 1 and 11, strands #18, 20 and 21.)* for the purpose of reinforcing a laminated structure *(See col. 1, ll. 15-26.)*.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time Applicant's invention was made to provide the structure with discontinuous, continuous and patterned structure as expressly taught by Rogosch ('784) and obviously taught by Rasmussen ('102) in Rasmussen ('102) in order to provide a strong, pleasing multilayered laminate.

Regarding claim 121, Rasmussen ('102) teaches wherein: the film A further including a patterned second discontinuous layer disposed on a second surface of the main layer, where the second discontinuous layer comprises a different polymer material, and the cross-laminate further comprising: a second B film arranged so the main direction of the second B film crosses the main direction of the film A and the pattern of the layer of the second B film crosses the pattern of the second layer of the film A, second strong bonds bonding the second B film to the film A together at intersections of the pattern of the second layer of the film A and the pattern of the layer of the second B film *(See p. 11, l. 25 to p. 12, l. 14, p. 6, ll. 1-9 and FIG-2 wherein films A and B with heat seal layers #c, main layers #a and lamination layers #b, with variable compositions are bonded to each other and wherein the layers are wrapped such as with a gusseted tube and as the layers progress to the opening(s) in the gusseted tube until the layers terminate. Furthermore, the bonding is clearly different and thus stronger or weaker when the bag is formed as compared to the bonding amongst each*

sub layers, a, b and c, of the films and amongst the films. Additionally, since the various layers comprise various compositions, various bonding amongst the layers and various bonding to form the package then the different regions of the structure clearly have stronger/weaker tensile strengths as compared to other regions.), where the second B film is either uniaxially or unbalanced biaxially molecularly oriented (See p. 5, ll. 26-31.), however, fails to expressly disclose wherein the various layers are continuous or discontinuous and patterned.

However, Rasmussen ('102) teaches wherein the structure is made into a bag for consumers, wherein the layers are continuous when wrapped such as with a gusseted tube and as the layers progress to the opening(s) in the gusseted tube until the layers terminate, becoming discontinuous. Furthermore, each layer clearly has a pattern whether it is substantially the same within the layer or upon the bonded and non-bonded areas with various bonding strengths and the additional layers and or/markings will clearly be applied at various regions in discontinuous and continuous manners to provide for the desired messages (See p. 6, ll. 1-9.). Additionally, pigments are added to the various compositions providing for further patterns (See p. 11, l. 25 to p. 12, l. 14.) for the purpose of providing a pleasing, strong bag for containing the packaged goods (See p. 6, ll. 1-9.).

Furthermore, Rogosch ('784) teaches wherein the patterned multilayered laminated structures are reinforced with discontinuous and continuous layers of strands and the bonding varied based on region and layers to be lamianted (See col. 3, ll. 20-55 and FIGs 1 and 11, strands #18, 20 and 21.) for the purpose of reinforcing a laminated structure (See col. 1, ll. 15-26.).

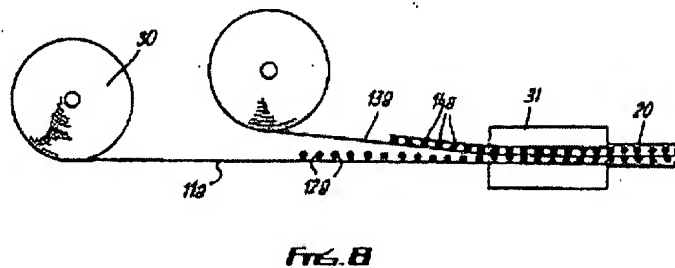
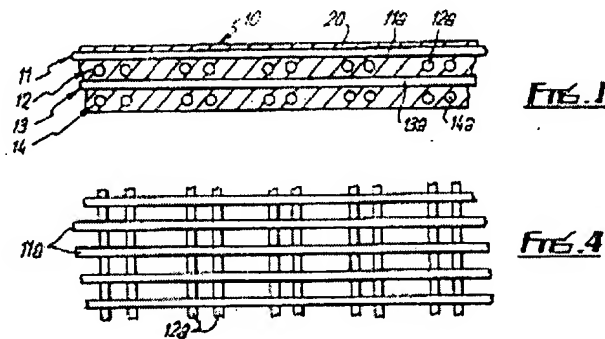
Therefore, it would have been obvious to a person having ordinary skill in the art at the time Applicant's invention was made to provide the structure with discontinuous, continuous and patterned structure as expressly taught by Rogosch ('784) and obviously taught by Rasmussen ('102) in Rasmussen ('102) in order to provide a strong, pleasing multilayered laminate.

19. Claims 118-122, 77, 83, 85, 89, 93 and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364).

Regarding claims 118, 120 and 122 Britton (US 4,454,184) teaches a cross-laminate comprising:

a first coextruded film A having a main direction of molecular orientation (*See p. 5, ll. 26-31.*) and including: a continuous main layer comprising a polymer material having a high tensile strength, a patterned discontinuous layer disposed on a surface of the main layer, where the layer comprises a different polymer material, a second coextruded film B having a main direction of molecular orientation and including: a continuous main layer comprising a polymer material having a high tensile strength, a patterned discontinuous surface layer disposed on a surface of the main layer, where the discontinuous layer comprises a different polymer material, where the film B is arranged so that the main direction of the film B crosses the main direction of the film A and the pattern of the discontinuous layer of the film B crosses the pattern of the discontinuous layer of the film A, and strong bonds bonding the films together at intersections of the pattern of the discontinuous layer of the film A and the pattern of the layer of the film B (*See col. 2, ll. 42-58, col. 3, ll. 1-19, col. 6, ll. 23-26, FIGs 4 and 8,*

#11a and #12a, multiple layers 3, 4, 5 and 6, FIGs 4 and 1 wherein #11a, #12a, #13a and #14a cross each other. See FIG-4, continuous films of adhesive above and below the strands with different polymers. See Fig-1 wherein the strands are not a solid sheet thus discontinuous in the direction between the strands and wherein the adhesive is not discontinuous between the strands.), however, fails to expressly teach wherein each of the films A and B having an uniaxial or biaxial molecular orientation.



However, Rasmussen ('364) teaches wherein each of the films A and B having an uniaxial or biaxial molecular orientation (See col. 6, ll. 1-5.) for the purpose of producing durable tarps for heavy duty applications (See col. 1, ll. 16-19.).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to either uniaxially or biaxially orient the films as taught by Rasmussen ('364) in Britton ('184) in order to provide durable tarps for heavy duty applications.

Regarding claim 119, Britton ('184) teaches a cross-laminate discussed above, however, fails to expressly disclose a continuous bonding layer interposed between the main layer and the discontinuous layer of each of the films A and B and weak bonds formed between the bonding layers of the films A and B in regions of the films free of the discontinuous layers.

However, the layers of Britton ('184) as illustrated in FIGs 1 and 4 and explained above clearly have varying degrees on bonding depending on the materials of the various layers, location of the bonds and how the structure is joined to form the final product (See col. 2, ll. 42-58, col. 3, ll. 1-19, col. 6, ll. 23-26, FIGs 4 and 8, #11a and #12a, multiple layers 3, 4, 5 and 6, FIGs 4 and 1 wherein #11a, #12a, #13a and #14a cross each other. See FIG-4, continuous films of adhesive above and below the strands with different polymers.) for the purpose of providing a strong multilayered final laminate (See col. 1, ll. 9-14 and col. 2, ll. 49-58.).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time Applicant's invention was made to provide the above structure in order to provide a strong, multilayered laminate.

Regarding claim 121, Britton ('184) teaches wherein: the film A further including a patterned second discontinuous layer disposed on a second surface of the main layer, where the second discontinuous layer comprises a different polymer material, and the cross-laminate further comprising: a second B film arranged so the main direction of the second B film crosses the main direction of the film A and the pattern of the layer of the second B film crosses the pattern of the second layer of the film A, second strong bonds bonding the second B film to the film A together at

intersections of the pattern of the second layer of the film A and the pattern of the layer of the second B film (*See col. 2, ll. 42-58, col. 3, ll. 1-19, col. 6, ll. 23-26, FIGs 4 and 8, #11a and #12a, multiple layers 3, 4, 5 and 6, FIGs 4 and 1 wherein #11a, #12a, #13a and #14a cross each other. See FIG-4, continuous films of adhesive above and below the strands with different polymers. See Fig-1 wherein the strands are not a solid sheet thus discontinuous in the direction between the strands and wherein the adhesive is not discontinuous between the strands.*), where the second B film is either uniaxially or unbalanced biaxially molecularly oriented (*See p. 5, ll. 26-31.*), however, fails to expressly disclose where the second B film is either uniaxially or unbalanced biaxially molecularly oriented (*See p. 5, ll. 26-31.*).

However, Rasmussen ('364) teaches where the second B film is either uniaxially or unbalanced biaxially molecularly oriented (*See col. 6, ll. 1-5.*) for the purpose of producing durable tarps for heavy duty applications (*See col. 1, ll. 16-19.*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to either uniaxially or unbalanced biaxially orient the films as taught by Rasmussen ('364) in Britton ('184) in order to provide durable tarps for heavy duty applications.

Regarding claim 77, Britton ('184) teaches wherein the pattern of the discontinuous layer of the film A comprises at least one first array of substantially parallel strands, the pattern of the discontinuous, layer of the film B comprises at least one second array of substantially parallel strand, and the strong bonds comprise crossing points of the two arrays formed by direct lamination (*See FIGs 1 and 4 and col. 3, l. 8 "spot welded" strands and col. 3, l. 17 "fused laminate"*).

Regarding claims 83 and 96, Britton ('184) obviously teaches wherein a strength of the strong bonds are at least 40 g cm^{-1} and a strength of the weak bonds are less than or equal to no more than 50% of a strength of the strong bonds, as measured by a peel test carried out on narrow specimens of the cross-laminate at a velocity of about 1 mm sec^{-1} , and the lamination strength in the strand-free regions is 75% of the bonding strength, as measured by the peel test since a structure with an equivalent structure would also have the same lamination strength (See col. 2, ll. 42-58.).

Regarding claim 85, Britton ('184) teaches a laminate (See FIGs 1 and 4 and col. 2, ll. 42-58.).

NOTE: the claim does not make sense since the claim depends on cancelled claim #84, thus, it is unclear what structure Applicant is attempting to further limit.

Regarding claim 88, Britton ('184) teaches wherein the bonding layers includes an adhesion modifying material to aid in adhesion of the weak bonds (See col. 2, ll. 42-58).

Regarding claim 89, Britton ('184) obviously teaches wherein the pattern of the discontinuous layer of the films A and B comprises at least two arrays of strands, and at least one of the two arrays of strands being formed of a polymer material differing in appearance from the another of the two arrays of strands and where the strands of the two arrays are interspersed (See col. 2, ll. 25-58 and FIGs 1 and 4.).

Regarding claim 93, Britton ('184) teaches a continuous bonding layer interposed between the main layer and the discontinuous layer of at least one of the films A and B. (See FIGs 1 and 4.).

20. Claim 78 is rejected under 35 U.S.C. 103(a) as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364) and Johnston (US 3,340,128).

Regarding claim 78, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the polymer material of the discontinuous layer of at least one of the films A and B comprises coloration material in an amount and coloration sufficient amount to render the at least on colored discontinuous layer visible through at least one side of the cross-laminate.

However, Johnston ('128) teaches wherein the polymer material of the strands of at least one of the arrays comprises coloration material in sufficient amount to render the at least on colored discontinuous layer visible through at least one side of the cross-laminate (*See col. 24, l. 58.*) for the purpose of providing a decorative motif (*See col. 24, ll. 59-60.*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to provide strands with coloration as taught by Johnston ('128) in Britton ('184) in order to provide a product having a decorative motif.

21. Claims 79-82, 86, 90, 94-95, 97-98 and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364) and Lappala (US 2,851,389).

Regarding claim 79, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however, fail to expressly disclose a thickness of the discontinuous layers of the films A and B are not greater than 20% of a thickness of their respective films.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used.*), which clearly changes the films/laminate ratio. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above thickness ratio as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*See col. 1, ll. 25-28.*).

Regarding claim 80, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however, fail to expressly disclose wherein a collective area of the discontinuous layers of the films A and B comprises no more than 60% of a surface area of their respective film sides.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used.*), which clearly changes the above area ratio. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above area ratio as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*See col. 1, ll. 25-28.*).

Regarding claim 81, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however, fail to expressly disclose wherein the thickness increase in each of the films A and B at the locations where the discontinuous layers are present is at most 20% of the film thickness in adjacent regions where the discontinuous layer are absent.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used.*), which clearly changes the

thickness increase. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above thickness increase as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (See *col. 1, ll. 25-28.*).

Regarding claims 82 and 100, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the distance from the center-to-center of adjacent pairs of strands in each array is between 2 mm and 40 mm (not greater than 20 mm).

However, Lappala ('389) teaches that any suitable pattern may be used (See *col. 2, l. 49-51, any suitable pattern.*) for the purpose of providing a laminate that is light and strong (See *col. 1, ll. 25-28.*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a suitable pattern that provides the above separation as taught by Lappala ('389) in Britton ('184) in order to provide a laminate that is light and strong.

Regarding claim 86, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the main layer of each of the two films A and B consists essentially of polyethylene or polypropylene.

However, Lappala ('389) teaches wherein the main layer of each of the two films A and B consists essentially of polyethylene (See *col. 2, l. 31 and ll. 66-67.*) for the purpose of providing a laminate that is light and strong (See *col. 1, ll. 25-28.*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to have layers comprising polyethylene as

taught by Lappala ('389) in Britton ('184) in order to provide a laminate that is light and strong.

Regarding claim 90, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the discontinuous layers of each of the films A and B constitutes at the highest 10% of the volume of the corresponding film.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used.*), which clearly changes the volume. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above volume as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*See col. 1, ll. 25-28.*).

Regarding claim 94, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the thickness of the discontinuous layers of each of the films A and B are not greater than 10% of a thickness of their respective film.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used.*), which clearly changes the films/laminate ratio. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above thickness ratio as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*See col. 1, ll. 25-28.*).

Regarding claim 95, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein a thickness increase in each of the films A and B at the locations where the discontinuous layer is present is at most 10% of a film thickness in regions of the films free of the discontinuous layer.

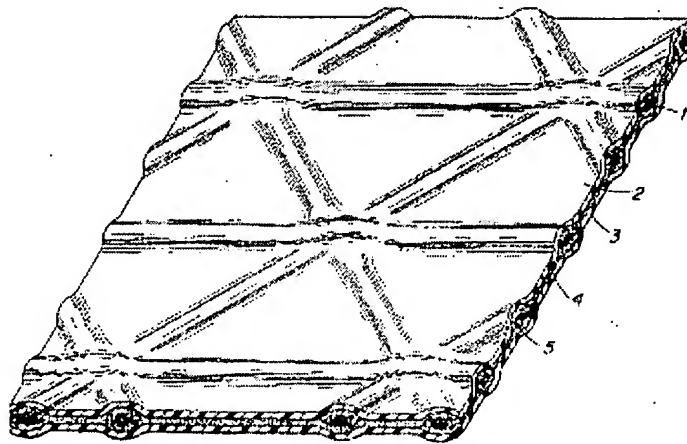
However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used.*), which clearly changes the thickness increase. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above thickness increase as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*See col. 1, ll. 25-28.*).

Regarding claim 97, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein thickness at its thickest of about 0.3 mm and wherein an exterior surface of the film A is corrugated to form a visible pattern of striations extending in one direction, where the spacing of the striations being at most about 3 mm, the main layer and the bonding layer of the film A are substantially transparent to enable the colored strands to be visible when the laminate is observed from one of the exterior surfaces of the cross-laminate, and the depth of the corrugations being sufficient to impart a three-dimensional effect to the cross-laminate such that the strands appear to be spaced internally from the exterior surface of the film A a distance substantially greater than an actual maximum thickness of the film A.

However, Lappala ('389) teaches a laminate thickness at its thickest of about 0.3 mm (*See col. 3, ll. 34-35 and col. 2, l. 45 wherein the films are less than 0.015 in (0.381 mm).*), the main layer and the bonding layer of the film A are substantially transparent to

enable the colored strands to be visible when the laminate is observed from one of the exterior surfaces of the cross-laminate (*FIG-3, #2*), where the spacing of the striations being at most about 3 mm (*FIG-3, corrugations created by strands*) the main layer and the bonding layer of the film A are substantially transparent to enable the colored strands to be visible when the laminate is observed from one of the exterior surfaces of the cross-laminate, and the depth of the corrugations being sufficient to impart a three-dimensional effect to the cross-laminate such that the strands appear to be spaced internally from the exterior surface of the film A a distance substantially greater than an actual maximum thickness of the film A (*See col. 2, l. 7.*), for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

FIG. 3



Therefore, it would have been obvious to a person of ordinary skill in the art the time of applicant's invention to provide such a spacing and configuration as taught by Lappala ('389) in Britton ('184) in order to provide a light and strong laminate.

Regarding claim 98, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the discontinuous layers of

each of the films A and B constitutes at their highest 5% of a height of their corresponding film.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used.*), which clearly changes the volume. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above height as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

22. Claims 87-88, 91-92 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364), Velazquez (US 5,614,297) and Cederblad et al. (US 6,204,207).

Regarding claim 87, Britton ('184) and Rasmussen (364) teaches the laminate discussed above, and Rasmussen (364) teaches the laminate wherein the main layers are selected from the group consisting of HDPE, LLDPE or a blend of the two (*col. 13, ll. 3-7*), and the strands in the first surface layers of the films is selected from a polymer which consists essentially of a copolymer of ethylene (*col. 13, ll. 11-30*), however, fail to expressly disclose wherein the bonding layers comprise LLDPE in admixture with 5 - 25% of a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 80 °C, the discontinuous layers comprise a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 100 °C.

However, Velazquez ('297) teaches wherein the bonding layers comprise LLDPE in admixture with 5 - 25% of a copolymer of ethylene having a melting point or a melting

range within the temperature range of 50 - 80 °C (*col. 8, ll. 26-47 and col. 3, l. 46*) for the purpose or providing a film that can be laminated with one or more films (*col. 6, ll. 13-17*).

Furthermore, Cederblad ('207) teaches wherein the discontinuous layers comprise a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 100 °C (*col. 12, l. 42 wherein the melting point is 67 °C /152 °F*) for the purpose of forming firm bonds (*col. 6, l. 63*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide a laminate with a surface layer of LLDPE and ethylene with the above melting point range and the above strands as taught by Velazquez ('297) and Cederblad ('207) in Britton ('184) to provide a laminate as described above.

Regarding claims 91-92 and 99, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein an average melting point of the polymer material of the discontinuous layer of each of the films A and B is at least about 10 °C/15 °C/20 °C lower than the average melting point of the polymer material which of the main layer of each of the films A and B.

However, Cederblad ('207) teaches wherein the average average melting point of the polymer material of the discontinuous layer of each of the films A and B is at least about 10 °C/20 °C lower than the average melting point of the polymer material which of the main layer of each of the films A and B (*col. 12, ll. 38-53*) for the purpose of providing firm and light bonds (*col. 6, ll. 60-67*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide strands with melting points below that of the films as taught by Cederblad ('207) in Britton ('184) in order to produce a laminate with firm and light bonds.

ANSWERS TO APPLICANT'S ARGUMENTS

23. In response to Applicant's arguments (*pp. 16-32 of Applicant's Paper filed 7 August 2007*) that the amended claims are patentable over the prior art previously made or record, it is noted said arguments are directed to the amended claims which are discussed above. Furthermore, it is noted that the newly cited Rasmussen reference (WO 01/96102) and the other references teach all of Applicant's claims as discussed above.

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

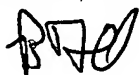
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571) 272-0496. The examiner can normally be reached on Monday -Thursday, 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-0996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Brent T O'Hern
Examiner
Art Unit 1794
December 3, 2007


NASSER AHMAD
PRIMARY EXAMINER 12/4/07